AUTHOR INDEX

VOLUME 52

Abney, Tom O., 331
Abraham, David, 742
Ackermans, F., 408
Ahmad, F., 631
Albright, Elizabeth L., 499
Alderete, John F., 70, 736
Almagor, Miriam, 240
Amako, Kazunobu, 236
Amano, Atsuo, 421
Anthony, Bascom F., 908
Anthony, Ronald L., 36
Arita, Michiko, 45
Arnon, Ruth, 562
Avigan, David, 756

Babcock, Lori, 803
Bach, Marie-Anne, 303
Balber, Andrew E., 223
Baldini, Mary M., 334
Barbour, Alan G., 549
Barenkamp, Stephen J., 183, 572
Barnes, David W., 714
Barrett, John F., 101
Barrett, Leah J., 702
Baseman, Joel B., 736
Baskerville, Arthur, 349
Becker, Jeanne, 488
Beesley, Julian, 344
Bell, Clara, 519
Bellanti, Joseph A., 853
Berche, Patrick, 50
Bertram, Timothy A., 285
Best, Gary K., 331
Bhakdi, Sucharit, 63
Blackburn, Evelyn, 650
Blanchard, D. Kay, 488
Bortolussi, Robert, 493
Bout, D., 823
Braley-Mullen, Helen, 867
Brennan, Michael J., 840
Brettle, R. P., 631
Britigan, Bradley E., 657
Britt, Lorene A., 138
Brogden, Kim A., 644
Broster, Malcolm G., 356
Burhop, Kenneth E., 905

Calder, M. A., 631
Calderón, Inés, 209
Caldwell, J., 682
Callahan, Lynn T., III, 56
Canning, Peter C., 285
Capron, A., 823
Carman, J. Anthony, 356
Carneiro, Célia Regina Whitaker, 230
Case, Steven E., 314
Casey, S. G., 384
Cassell, Gail H., 594
Caugant, Dominique A., 213
Cavacini, Lisa A., 637
Cerny, Andreas, 12
Cerquetti, M. Cristina, 853
Chaby, Richard, 777
Chamberlain, Constance, 538
Chedid, Louis A., 725
Chen-Woan, Melissa, 401
Chensue, Stephen W., 341
Chia, John K. S., 756
Chiang, Yu-wei, 792
Cho, Y. J., 828
Cisar, John O., 840
Clark-Curtiss, Josephine E., 101
Clemons, Karl V., 763
Cluzel, Roger, 468
Cohen, L., 555
Cohen, Myron S., 657
Cohen, Paul S., 18
Concepcion, Nelydia F., 908
Conlin, Christopher A., 676
Cowell, James L., 695
Cox, Charles D., 263, 885
Cox, Rebecca A., 138
Cromartie, W. J., 390
Crosa, Jorge H., 192
Cross, Alan S., 617
Croughan, M. J., 631
Cruz, Nancy, 293
Cryz, S. J., Jr., 161
Cunningham, Thomas M., 586
Curtiss, Roy, III, 101
Cutlip, Randall C., 644

Danielsson, D., 529
Darfeuille-Michaud, Arlette, 468
Davey, Michael P., 341
David, Brien C., 707
Davis, Jerry K., 594
de Chastellier, Chantal, 252
Deicher, Helmuth, 818
de Jong, Marten, 175
de Jong, M. H., 897
Deslèe, D., 823
Devine, Dana V., 223
Dosne, Anne M., 725
Dougan, Gordon, 344
Dowsett, A. Barry, 349
Dubor, Frédéric, 725
Dyer, D., 529

Edwards, Mark, 863
Ehrenfreund, Cindy, 56
Eisemann, Christine S., 326
Eisenstein, Toby K., 504
Ekwall, Erik, 834
Ellner, Jerrold J., 748
Ellwood, Derek C., 349
Ensergueix, Danielle, 777
Esser, Ronald E., 390, 459
Evenberg, Dolf, 175
Ezzell, J. W., Jr., 454

Fairchild, Edward J., II, 613
Fairchild, Robert L., 867
Falk, Ronald J., 223
Falkowski, Walter, 863
Fanning, Mary M., 534
Farrell, Jay P., 742
Faruki, H., 529
Faulkner, Gary, 493
Fehniger, Thomas E., 579, 586
Feldman, David, 763
Ferretti, Joseph J., 144
Finkelstein, Richard A., 562
Finlay-Jones, John J., 245, 633
Fischetti, Vincent A., 609
Fleming, Tony J., 600
Flynn, Patricia M., 26
Forestier, Christiane, 468
Frank, R. M., 408
Franzon, Vicki L., 279
Frehel, Claude, 252
Friedman, Herman, 488
Frik, Jan, 175
Fujikawa, Hiroshi, 134
Fukui, Komei, 628
Fuquay, Janice I., 714
Fürer, E., 161
Furugouri, Kou, 623
Futrovsky, Susan L., 617

Gaillard, Jean Louis, 50
Gammon, Maureen T., 56
Ganz, Tomas, 902
Germanier, R., 161
Gervais, Francine, 688
Gibbons, Ronald J., 378, 555
Gilon, Chaim, 240
Girard, Robert, 777
Gmür, Rudolf, 768
Goldhar, J., 205
Goodrum, Kenneth J., 803
Goodsaid, Federico, 309
Granoff, Dan M., 183
Grant, Christopher C. R., 538
Gray, Beulah H., 90
Guerrant, Richard L., 323, 702
Guggenheim, Bernhard, 768

Hackbarth, C. J., 484
Hackstadt, Ted, 337
Hahn, Helmut, 488
Hammarström, Lennart, 834
Hamood, Abdul N., 476
Hanioka, Takashi, 421
Harada, Kazuhiro, 872
Harboe, Morten, 293
Hart, Prue H., 245
Hay, D. I., 555
Hayashi, Katsutoshi, 397
Hayashi, Seiji, 128
Hayes, Edward, 56
Hayes, Stanley F., 549
Hedlund, K. W., 454
Heiland, Ramona A., 549
Hengartner, Hans, 12
Hess, C. B., 828
Heyworth, Martin F., 568
Hildner, William K., 26
Hill, Joseph O., 364
Holder, Ian Alan, 200
Holland, Ian Barry, 63
Hollingshead, Susan K., 609
Holt, Peter S., 96
Honda, Takeshi, 45, 319
Hooke, Anne Morris, 853
Horiguchi, Yasuhiko, 31
Hormaeche, Carlos, 344
Hosoe, Shigeto, 128
Hovde, Carolyn J., 90
Hrodek, Katerina, 768
Huesca, Mario, 309
Hughes, Carrie A. Norton, 914
Hügin, Ambros W., 12
Hui, George S. N., 314
Huq, I. M., 323

Igarashi, Hideo, 134
Ikeda, Takako, 872
Imoto, Masahiro, 872
Inoshita, Eiji, 421
Ishikawa, Yoshiharu, 623
Issekutz, Andrew, 493
Ivins, B. E., 454

Jackson, Jesse, 56
Jacob, Chaim O., 562
Jacobs, William R., 101
Jamet, Pierre, 303
Janusz, Michael J., 459
Jarboe, Daniel L., 326
Jemski, J., 454
Jerrells, Thomas R., 326
Jewell, Marvin, 56
Johnson, Priscilla T., 707
Joly, Bernard, 468

Kaeberle, Merlin L., 792
Kahane, Itzhak, 240
Kamata, Yohichi, 31
Kamata, Yoichi, 786
Kan, Siu-Chow, 314
Kang, Jane H., 908
Kaper, James B., 334
Kapperud, Georg, 85
Karpas, Arthur, 519
Kasai, Nobuhiko, 872
Kasmala, Lorraine, 70
Kato, Hirohisa, 628
Kaufman, Bennett M., 617
Kawase, Ichiro, 128
Kazura, James W., 534
Kelly, Daryl J., 718
Kilian, Mogens, 171
Killar, Loran M., 504
Kim, Kwang Sik, 908
King, Charles H., 748
Kirkland, Jerry J., 331
Kishimoto, Susumu, 128
Klein, J. P., 408
Klein, Thomas W., 488
Klimpel, G. R., 828
Klimpel, K. D., 828
Kling, J. Malcolm, 331
Knudson, Gregory B., 509
Koellreutter, Brigitte, 428
Korhonen, Timo K., 213
Kotani, Hitoshi, 437
Kotani, Shozo, 872
Kozaki, Shunji, 31, 786
Kozel, Thomas R., 1
Kraft, William G., 707
Kramer, Kenton J., 314
Kume, Katsumi, 370
Kunkel, Steven L., 341
Kuramitsu, Howard K., 166
Kusumoto, Shoichi, 872

Lachmann, Petra G., 818
Lang, Thierry, 252
Lassen, Jørgen, 85
Laux, David C., 18
Law, Edward J., 200

Lee, David A., 397
Lehmkuhl, Howard D., 644
Lehner, T., 682
Lehrer, Robert I., 902
Leppla, S. H., 454
Liew, Foo Y., 344
Lindberg, Alf A., 834
Lior, Hermy, 702
Little, Stephen F., 509
Lobos, Sergio R., 209
Long, Carole A., 637
Loo, Deryk T., 714
Lopatin, Dennis E., 650
Lopes, José Daniel, 230
Lopez, Angel F., 245
Lovett, Michael A., 579, 586
Lucken, Roger, 76
Lugtenberg, Ben, 175
Lutz, Frieder, 846

MacIntyre, Sheila, 76
Mackert, Paul W., 26
Mackman, Nigel, 63
Madonna, Gary S., 6
Manchee, Richard J., 356
Manclark, Charles R., 695
Manning, Paul A., 279
Mansa, Bendt, 171
Manyak, Christine L., 56
Marcelis, Jan H., 892
Marsh, Philip D., 349
Maskell, Duncan, 344
Masuno, Tomiya, 128
McCabe, Robert E., 151
McDermid, Ann S., 349
McDonald, Peter J., 245, 633
McGarrity, Gerald J., 437
McGregor, Douglas D., 401
McKee, Ailsa S., 349
McLeod, D. T., 631
McSweegan, Edward F., 18
Mehlert, A., 682
Melling, Jack, 356
Miller, Helen L., 803
Miller, James N., 579, 586
Miner, Karen M., 56
Misfeldt, Michael L., 96
Mitsuyama, Masao, 236, 730
Miwatani, Toshio, 45, 319
Miyata, Yasuhiko, 623
Momotani, Eiichi, 623
Montaño, Luis F., 309
Mora, Guido C., 209
Morelec, Marie-Josèphe, 777
Morgan, Donna R., 707
Morgan, Perri A., 664
Morris, Randal E., 445
Mortensen, Richard F., 688
Moseley, Steve L., 323
Motley, Milwood A., 676
Munson, Robert S., Jr., 414
Musser, James M., 183

Nagai, Sadamu, 293
Nagai, Takafumi, 786
Nakai, Toyotsugu, 370
Nakano, Hitoo, 730
Nataro, James P., 334
Neely, Alice N., 200
Neeser, Jean-Richard, 428
Neuhof, Heinz, 846
Nicaud, Jean-Marc, 63
Niemialtowski, Marek, 798
Niesel, D. W., 828
Nikoloutsopoulos, Antonios, 245
Nolte, Frederick S., 676
Nomoto, Kikuo, 156, 236, 730
Nomoto, Koji, 156, 236
Noonan, Susan K., 401
Norgard, Michael V., 110
Nulsen, Mary F., 633

Obara, Yoshiaki, 623
Ofek, I., 205
Ogasawara, Jun, 786
Ogawa, Tomohiko, 872
Ogier, J., 408
Ogura, Takeshi, 128
Ohara, Reiko, 236
Okamura, Haruki, 872
Olds, G. Richard, 513
Ota, Fusao, 628
Owen, Peter, 76

Palmer, Kevin L., 314
Palomino, Carmen, 209
Parke, James C., Jr., 519
Parker, Charlotte D., 476
Parra, Cecilia, 309
Paster, Bruce J., 378
Patarroyo, Manuel E., 293
Pattison, Patricia E., 213
Peacock, Marius G., 120
Pearson, Richard D., 702
Peavy, Duane L., 613
Pennie, Ross A., 702
Persson, Mats A. A., 834
Peterson, Jon E., 6
Pfrommer, Gail S. T., 1
Pollack, Matthew, 756
Proctor, Richard A., 905

Quie, Paul G., 397

Radolf, Justin D., 579, 586
Raetz, Christian R. H., 905
Ramirez, Clara, 293
Ramsay, Mary A., 671
Rapp, Vicki J., 414
Rastogi, Nalin, 252
Rayón, Ignacio, 309
Reed, William P., 499
Rees, John C., 718
Register, Karen B., 664
Rehg, Jerold E., 26
Remick, Daniel G., 341
Remington, Jack S., 151
Ribi, Edgar E., 6
Ridel, Pierre-Richard, 303
Ristroph, J. D., 454
Robbins, John B., 519
Robin, Yves, 303
Rodloff, Arne C., 488
Rodríguez, Luis H., 209
Rogers, A. H., 897
Rojas, Héctor A., 209
Rosenthal, Raoul S., 600
Ross, Richard F., 414
Rossi, Alida A., 812
Roth, James A., 285, 792
Rubin, Lorry G., 911
Russo, J., 620

Sacci, John B., 36
Sadoff, J. C., 161
Sadoff, Jerald C., 617
Saelinger, Catharine B., 445
Sakaguchi, Genji, 31, 786
Sakatani, Mitsunori, 128
Samejima, Yuji, 370
Sandberg, Ann L., 840
Sande, M. A., 484
Sanford, Barbara A., 671
Sano, Masatoshi, 730
Sansonetti, Philippe, 50
Sato, Setsuko, 166
Saxer, Ulrich P., 768
Schaeffer, Anthony J., 863
Schär, Gertrud, 763
Schiffman, Gerald, 519
Schlesselman, James J., 519
Schneerson, Rachel, 519
Scholler, M., 408
Schrumpf, Merry E., 549
Schwab, John H., 390, 459
Scott, David F., 331
Scott, June R., 609
Seeger, Werner, 846
Selander, Robert K., 183, 213
Sellwood, Richard, 344
Selsted, Michael E., 902
Shafer, W. M., 384
Shenep, Jerry L., 26
Shiba, Tetsuo, 872
Shiloach, Joseph, 519
Shimizu, Takako, 156
Shizukuishi, Satoshi, 421
Sidberry, Hazel F., 617
Siddiqui, Wasim A., 314
Sigal, Nolan H., 56
Silver, Richard P., 192
Silverblatt, Fredric J., 579
Simpson, Lance L., 858
Singh, Prati Pal, 688
Skamene, Emil, 688
Small, P. M., 484
Smith, C. I. Edvard, 834
Snellgrove, Richard L., 26
Snider, Denis P., 271
Sordelli, Daniel O., 853
Spagnuolo, Philip J., 748
Sparling, P. F., 529
Spencer, Lyn K., 245
Spitznagel, J. K., 384, 803
Sriyosachati, Somporn, 885
Stavitsky, Abram B., 513
Steinbach, Suzanne, 756
Sterner, Kay E., 867
Stevens, David A., 763
Stewart, Scott T., 120
Stimpson, Stephen A., 390
Stokes, Dennis C., 26
Storm, Paul, 175
Stover, E. Price, 763
Sublett, Richard D., 476
Sugimoto, Chihiro, 370
Suprun-Brown, Leora, 70
Sutton, Ann, 519
Swancutt, Mark A., 110
Sweeney, Kathy, 344
Szklarek, Dorothy, 902

Takada, Haruhiko, 872
Takahashi, Ichiro, 872
Takeda, Tae, 45
Tam, Leslie Q., 314
Tamagawa, Hiroo, 421
Tamura, Hiroshi, 134
Tamura, Toshihide, 872
Tanaka, Shigenori, 134, 872
Targowski, Stanislaw P., 798
Täuber, M. G., 484
Tessier, Sandra L., 549
Thomas, D. Denee, 736
Thomas, Wayne R., 812
Tiemens, Karen M., 323
Torres, Martha Lucia, 293
Tsujimoto, Masachika, 872
Tsunemitsu, Akira, 421
Turnbull, Peter C. B., 356
Twehous, Debra A., 110

Uemura, Takashi, 31
Underdown, Brian J., 271
Urisu, Atsuo, 695
Usami, Hiroyuki, 134

Vadas, Mathew A., 245
Väisänen-Rhen, Vuokko, 213
Valvano, Miguel A., 192
van Boxtel, Ria, 175
van der Hoeven, J. S., 897
van Houte, J., 620
Vasil, Michael L., 538
Verhoef, Jan, 892
Vogel, Stefanie N., 6
Vreede, R. W., 892

Wachsmann, D., 408
Wadolkowski, Elizabeth A., 18
Walfield, Alan M., 586
Walker, David H., 120
Wallsmith, Dirk E., 600
Walmrath, Dieter, 846
Wang, Zhen, 519
Warejcka, Debra J., 803
Watanabe, Yoshitsugu, 730
Weaver, James L., 803
Weeks, Claudia R., 144
Weidanz, William P., 637
Weikel, Cynthia S., 323
Weiner, David J., 742
Will, James A., 905
Williams, Elaine, 56
Williams, Jim C., 120
Williams, Kristina M., 36
Williams, Peter H., 213
Williams, Taffy J., 18
Williamson, Jo S. P., 594
Willms, Kaethe, 309
Wrann, Michael, 12
Wuersch, Pierre, 428
Wyrick, Priscilla B., 664

Yagawa, Katsuro, 628
Yamaga, Karen M., 314
Yamamura, Yuichi, 128
Yatziv, Shaul, 240
Yoh, Myonsun, 319
Yokokura, Teruo, 156, 236
Yoshimura, Hiroyuki, 872
Yoshino, Tomoo, 623
Yotis, William W., 914

Zilberberg, A., 205
Zilm, P. S., 897
Zinkernagel, Rolf M., 12
Zweerink, Hans, 56

SUBJECT INDEX
VOLUME 52

Abscess formation
nonimmune mice, 633
T lymphocytes, 633
Actinobacillus actinomycetemcomitans
periodontitis, 768
systemic host response, 768
Actinomyces naeslundii
adherence, 840
glycoproteins, 840
lectins, 840
Active inflammation
interleukins, 341
tuberculosis, 341
Adherence
adhesive factor, 468
A. naeslundii, 840
antigens, 344
aromatic hydrocarbons, 863
B. pertussis, 695
E. coli, 205, 334, 344, 428, 468, 863
enterotoxins, 205
epithelial cells, 863
fibronectin, 736
glycoproteins, 840
hemagglutinin, 695
HEp-2 cells, 334
infant mouse model, 205
inhibition, 863
intestinal colonization, 205
lectins, 840
T. pallidum, 736
type 1 pili, 428
WiDr cells, 695
Adhesins
direct adhesin overlay, 671
S. aureus, 671
staphylococcal membrane receptors, 671
Aerobactin transport system
chromosomes, 192
E. coli, 192
hemolysin production, 192
iron metabolism, 192
plasmids, 192
Aminopyridines
botulism, 858
C. botulinum, 858
toxins, 858
Anthrax
B. anthracis, 509
vaccines
live spore, 509
protective antigen, 509
Antibodies
anthrax toxin, 356
antigens, 356
capsular polysaccharide-tetanus toxid conjugates, 519
carbohydrate-protein conjugate, 408
complement, 892
E. coli, 892
G. muris, 271
H. influenzae, 519, 572
lethal factor components, 356
liposomes, 408
murine antibody response, 271
opsonins, 892
otitis media, 572
parasites, 271
porin antigens, 209
protective immunity, 356
responses
saliva, 408
serum, 408
rough mutants, 892
Salmonella spp., 892
S. mutans, 408
S. typhi, 209
typhoid infection, 209
Antibody-dependent cytotoxicity
F. nucleatum, 650
sensitization, 650
Antigenic variation
N. gonorrhoeae, 529
outer membrane proteins, 529
Antigens
adherence determinant, 344
anthrax toxin, 356
antibodies, 356
antibody binding, 579
B. anthracis, 356
binding activity, 171
caries prevention, 682
C. botulinum, 786
C. burnetii, 337
C. immitis, 138
E. coli, 344, 586
E. rhusiopathiae, 818
exoantigen
characterization, 138
isolation, 138
Fab_2 fragments, 171
gingival immunization, 682
immunoglobulins, 171
immunoglobulin subclass patterns, 834
lethal factor components, 356
lipopolysaccharides, 337
monoclonal antibodies, 230
outer membrane, 586
P. aeruginosa vaccine PEV, 76
porins, 209
protection, 76
R. conorii, 326
recombinant antigen 4D, 579
R. rickettsii, 120
Salmonella spp., 834
S. flexneri, 834
S. mansoni, 230
smooth lipopolysaccharide, 76
S. mutans, 682
S. mutans polysaccharide, 628
structure, 786
S. typhi, 209
surface antigenic components
characterization, 818
solubilization, 818
T-cell hybridomas, 326
toxins, 786
T. pallidum, 579, 586
typhoid infection, 209
variation, 337
Aotus monkey immunity
monoclonal antibodies, 314
P. falciparum, 314
Aromatic hydrocarbons
E. coli adherence, 863
epithelial cells, 863
Arthritis
antigens, 818
bacterial cell wall degradation, 459
E. rhusiopathiae, 818
mutanolysin, 459
Arthropathic activity
N. gonorrhoeae
disseminated disease, 600
peptidoglycan fragments, 600
Atrophic rhinitis
cell surface proteins, 175
P. multocida, 175
Attachment
pellicle receptors, 555
S. mutans, 555
S. sobrinus, 555

Bacillus anthracis
anthrax toxin, 356
antigens, 356
immunization studies, 454
lethal factor components, 356
plasmids, 454
protective immunity, 356
toxins, 454
vaccines, 509
Bacterial clearance
endotoxin liberation, 26
methylprednisolone, 26
Bacterial competition
neutrophils, 657
oxygen consumption, 657
Bacterial growth rates
effect of body temperature, 484
meningitis, 484
S. pneumoniae, 484
Bacteriophage T12
S. pyogenes, 144
type A exotoxin gene, 144
Bacteroides fragilis
macrophages, 488
phagocytosis, 488
Bacteroides gingivalis
exohemagglutinin
characterization, 421
isolation, 421
hemin, 349
periodontitis, 768
physiology, 349
systemic host response, 768
virulence, 349
Bacteroides intermedius
periodontitis, 768
systemic host response, 768
Binding
C. neoformans, 1
complement, 1
iC3b, 1
S. aureus, 714
serum spreading factor, 714
yeast, 1
Body temperature
bacterial growth rates, 484
meningitis, 484
S. pneumoniae, 484
Bordetella bronchiseptica
dermonecrotic toxin, 370
Bordetella pertussis
adherence, 695
hemagglutinin, 695
WiDr cells, 695
Borrelia spp.
epitopes, 549
monoclonal antibodies, 549
Botulism
aminopyridines, 858

C. botulinum, 858
toxins, 858
Branhamella catarrhalis
immunoglobulins, 631
protease production, 631
Brucella abortus
neutrophils, 285
preferential inhibition, 285
primary granule release, 285
Brugia malayi
"*C. parvum*," 534
macrophages, 534
M. bovis, 534
microfilarial cytotoxicity, 534
P. acnes, 534
Burn wounds
C. albicans, 200
lowered resistance, 200
P. aeruginosa, 200

Campylobacter concisus
chemotactic response, 378
formate, 378
gingival colonization, 378
Campylobacter jejuni
serological characterization, 702
susceptibility, 702
Candida albicans
burn wounds, 200
enhanced susceptibility to, 200
P. aeruginosa, 200
proteolytic enzymes, 200
rabbit granulocyte peptides, 902
synergistic activity, 902
Capsular polysaccharide-tetanus toxoid
conjugates
H. influenzae, 519
serum antibodies, 519
Caries
antigens, 682
caries prevention, 682
oral microorganisms
characterization, 897
growth parameters, 897
S. mutans, 682
Cell surface proteins
atrophic rhinitis, 175
characterization, 175
P. multocida, 175
Cell surface receptors
intracellular killing, 245
peritoneal exudate neutrophils, 245
P. mirabilis, 245
Cell walls
complement fixation, 803
degradation, 390, 459
group A and D streptococci, 390
lysozyme, 803
mutanolysin, 459
Streptococcus spp., 803
Chemiluminescent response
H. influenzae, 397
polymorphonuclear leukocytes, 397
S. pneumoniae, 397
Chemotaxins
neutrophil-mediated killing, 748
opsonins, 748
S. mansoni, 748
Chemotaxis
Chlamydia spp., 664
polymorphonuclear leukocytes, 664
C3H/HeN mice
acquired immunity, 128
N. rubra cell wall skeleton, 128
Chlamydia spp.
chemotaxis, 664
polymorphonuclear leukocytes, 664
Cloning
DNA coding, 812
E. coli, 279
hemagglutinin gene, 279
H. influenzae type b, 812
outer membrane proteins, 812
V. cholerae, 279
Clostridium botulinum
aminopyridines, 858
antigens, 786
botulism, 858
monoclonal antibodies, 786
toxins, 786, 858
Clostridium perfringens
enterotoxins, 31
monoclonal antibodies, 31
Coccidioides immitis
exoantigen
characterization, 138
isolation, 138
Colimycin
endothelial cells, 725
lipopolysaccharides, 725
plasminogen antiactivator, 725
polymyxin B, 725
Colony-stimulating factor
C3H/HeN mice, 128
enhanced production, 128
N. rubra cell wall skeleton, 128
Complement
activation, 1
alternative pathway regulation, 223
antibodies, 892
antimicrobial activity, 853
cells walls, 803
C. neoformans, 1
E. coli, 892
fixation, 803
iC3b binding, 1
lungs, 853
lysozyme, 803
opsonins, 892
P. aeruginosa, 853
rough mutants, 892
Salmonella spp., 892
Streptococcus spp., 803
T. brucei subsp. *gambiense*, 223
T. pallidum
antibody-binding resistance, 579
recombinant antigen 4D, 579
yeast, 1
Complexing
lipopolysaccharides, 644
lung surfactant, 644
Coxiella burnetii
antigens, 337
lipopolysaccharides, 337
Cryptococcus neoformans
complement activation, 1
iC3b binding, 1
Cutaneous infection
mouse model, 707
Staphylococcus spp., 707
Cyclosporin A
antibacterial activity, 823
immunity, 12
L. monocytogenes, 12
S. mansoni, 823
Cytotoxicity
antibody dependence, 650
F. nucleatum, 650

Delayed-type hypersensitivity
immunity, 504
S. typhimurium, 504
Dermonecrotic toxin
B. bronchiseptica, 370
characterization, 370
Diarrhea
E. coli, 323
STb enterotoxin, 323
Dipetalonema viteae
immune response
cellular, 742
humoral, 742
jirds, 742

Endotoxemia
lipid A, 905
protection, 905
Endotoxins
activities, 872
bacterial clearance, 26
clearance, 134
early-phase tolerance, 6
E. coli, 6, 56, 613
E. coli-induced sepsis, 26
liberation, 26
lipid A, 6
lipid peroxidation, 613
methylprednisolone, 26
monoclonal antibodies, 56
Salmonella-type lipid A, 872
S. aureus, 134
S. typhimurium, 6
toxic shock syndrome toxin-1, 134
Enteritis
C. jejuni
serological characterization, 702
susceptibility, 702
Enterotoxins
adhesive factor, 468
cholera toxin peptides, 562
C. perfringens, 31
diarrheal illness, 323
E. coli, 323, 468, 562
monoclonal antibodies, 31
resistance to, 562
STb, 323
V. cholerae
characterization, 45
purification, 45
Enzymes
burn wounds, 200
C. albicans, 200
P. aeruginosa, 200
proteolytic enzymes, 200
Epithelial cells
adherence, 840, 863
A. naeslundii, 840
aromatic hydrocarbons, 863
E. coli, 863
interferons, 828
invasion, 828
plant lectins, 840
Shigella spp., 828
Epitopes
Borrelia spp., 549
flagellar epitope, 549
monoclonal antibodies, 549
Erysipelothrix rhusiopathiae
surface antigenic components

characterization, 818
solubilization, 818
Escherichia coli
adherence, 205, 334, 428, 468, 863
adherence antigen determinant, 344
adhesive factor, 468
aerobactin transport system, 192
antibodies, 892
antigens, 586
aromatic hydrocarbons, 863
cholera toxin peptides, 562
clonal structure, 213
complement, 892
diarrheal illness, 323
endotoxins, 56, 613
enterotoxins, 205, 468, 562
epithelial cells, 863
genetic characterization, 213, 279
glycopeptides, 428
hemagglutinin gene, 279
hemolysins, 63, 192
HEp-2 cells, 334
infant mouse model, 205
intestinal colonization, 205
iron metabolism, 192
lipopolysaccharides, 617
membrane damage, 63
meningitis, 213
monoclonal antibodies, 56, 110, 617
mouse small intestine, 18
mucosal receptors, 18
neonatal septicemia, 213
opsonins, 617, 892
outer membrane, 586
recombinant DNA-derived immunogen, 110
rough mutants, 892
STb enterotoxin, 323
T. pallidum, 110, 586
type 1 pili, 428
V. cholerae, 279
Exoantigens
characterization, 138
C. immitis, 138
isolation, 138
Exohemagglutinin
B. gingivalis, 421
characterization, 421
isolation, 421
Exotoxin A
immune response suppression, 96
P. aeruginosa, 96
Exotoxin A gene
P. aeruginosa, 538
virulence, 538
Exotoxins
fibroblasts, 445
Pseudomonas exotoxin A, 445

Fab_α fragments
antigen-binding activity, 171
immunoglobulin A1 protease, 171
Ferritin
bovine paratuberculosis, 623
granulomas, 623
Fibroblasts
glutathione redox cycle, 240
M. pneumoniae, 240
vitamin E, 240
Fibronectin
attachment, 736
extracellular matrix, 736
T. pallidum, 736
Filamentous hemagglutinin
adherence, 695
B. pertussis, 695
Fimbriae
E. coli, 468
nonfimbrial adhesive factor, 468
Flagella
Borrelia-specific antibodies, 549
epitopes, 549
Flagellin
S. typhi, 209
typhoid infection, 209
Flow cytometric analysis
L. mexicana subsp. *mexicana*
binding, 36
uptake, 36
monoclonal antibodies, 36
peritoneal macrophages, 36
promastigotes, 36
Fluoride
plaque, 914
T. denticola, 914
Formate
C. concisus, 378
chemotactic response, 378
gingival colonization, 378
Fructosyltransferase gene
characterization, 166
isolation, 166
S. mutans, 166
Fusion inhibition
macrophages, 252
M. avium, 252
phagosomes, 252
Fusobacterium nucleatum
antibody-dependent cytotoxicity, 650
sensitization, 650

Gamma radiation
host defenses, 718
R. tsutsugamushi, 718
scrub typhus, 718
Genetic characterization
cloning, 812
E. coli, 213, 279, 334
exotoxin A gene, 538
fructosyltransferase gene
characterization, 166
isolation, 166
group A streptococci, 609
hemagglutinin gene, 279
HEp-2 adherence, 334
H. influenzae, 183, 812
meningitis, 213
M protein, 609
neonatal septicemia, 213
N. gonorrhoeae, 529
outer membrane proteins, 529, 812
P. aeruginosa, 538
penB locus, 529
S. mutans, 166
S. pyogenes bacteriophage T12, 144
type A exotoxin gene, 144
V. cholerae, 279
virulence, 538
Giardia muris
immunoglobulins, 271, 568
mouse intestines, 568
murine antibody response, 271
trophozoites, 568
Gingival colonization
C. concisus, 378
formate, 378
Gingival immunization
antigens, 682
caries prevention, 682
S. mutans, 682
Glutathione redox cycle
fibroblasts, 240
M. pneumoniae, 240
protective effects, 240
vitamin E, 240
Glycopeptides
adherence, 428
E. coli, 428
type 1 pili, 428
Glycoprotein immunogen
monoclonal antibodies, 70
T. vaginalis, 70
Glycoproteins
adherence, 840
A. naeslundii, 840
plant lectins, 840
Granulocytes
antimicrobial activity, 384
N. gonorrhoeae, 384
pyocin, 384
Granulomas
inflammation
modulation, 513
S. japonicum, 513
iron metabolism, 623
M. paratuberculosis, 623
Group A streptococci
genetic characterization, 609
M protein genes, 609
Group B streptococci
antimicrobial activity, 908
immunoglobulins, 908
Growth parameters
oral microorganisms, 897
plaque, 897

Haemophilus influenzae
antibodies, 519, 572
capsular polysaccharide-tetanus toxoid conjugates, 519
genetic characterization, 183
nontypable, 183
otitis media, 572
polymorphonuclear leukocytes, 397
serological characterization, 572
S. pneumoniae, 397
Haemophilus influenzae type b
cloning, 812
genetic characterization, 812
multiplication rates
in vitro, 911
in vivo, 911
outer membrane proteins, 812
Haemophilus pleuropneumoniae
outer membrane protein, 414
"*Haemophilus somnus*"
neutrophil suppression, 792
polymorphonuclear leukocytes, 792
Hemagglutinin
adherence, 695
B. gingivalis, 421
B. pertussis, 695
E. coli, 279
exohemagglutinin, 421
genetic characterization, 279
V. cholerae, 279
WiDr cells, 695
Hematopoietic response
enhancement, 156

L. casei, 156
Hemin
B. gingivalis
physiology, 349
virulence, 349
Hemolysins
aerobactin, 192
cell damage, 63
characterization, 319
E. coli, 63, 192
iron metabolism, 192
L. monocytogenes, 50
production, 192
purification, 319
transmembrane pore generation, o3
transposon mutagenesis, 50
V. cholerae, 319
virulence, 50
V. parahaemolyticus, 319
Hepatic clearance
opsonins, 499
S. pneumoniae, 499
HEp-2 cells
adherence, 334
E. coli, 334
serotypic characterization, 85
Y. enterocolitica, 85
Hormones
progesterone, 763
S. aureus, 331
T. mentagrophytes, 763
toxic shock syndrome, 331
Host defense
human sera, 493
L. monocytogenes, 493
opsonins, 493
Humoral immune response
Rocky mountain spotted fever, 120
R. rickettsii, 120
Hybridomas
characterization, 326
production, 326
R. conorii, 326
T cells, 326

Immune response
P. aeruginosa exotoxin A, 96
suppression, 96
Immunogens
E. coli, 110
monoclonal antibodies, 70
T. pallidum, 110
T. vaginalis, 70
Immunoglobulins
antigen binding, 171
antimicrobial activity, 908
B. catarrhalis, 631
capsular polysaccharides, 867
Fab_c fragments, 171
G. muris trophozoites, 568
group B streptococci, 908
IgA, 834
IgG, 834
IgM, 867
lipopolysaccharides, 834
mouse intestines, 568
proteases
IgA1, 171
IgGA1, 631
Salmonella antigens, 834
S. flexneri, 834
vaccines, 867
Infant mouse model
E. coli
adherence, 205
colonization, 205
enterotoxins, 205
Interferons
epithelial cell invasion, 828
natural IFN, 828
recombinant IFN, 828
Shigella spp., 828
Interleukins
active inflammation, 341
IL-1
release, 303, 341
leprosy, 303
macrophages, 303
tuberculosis, 341
Intestines
E. coli
adherence, 205
colonization, 205
G. muris trophozoites, 568
immunoglobulins, 568
infant mouse model, 205
Iron metabolism
acquisition, 885
aerobactin transport system
chromosome mediated, 192
plasmid mediated, 192
E. coli, 192
ferritin, 623
granulomas, 623
hemolysin production, 192
lactoferrin, 623
M. paratuberculosis, 623
P. aeruginosa, 263, 885
pyocyanin, 263
siderophores, 885
transferrin, 263, 623, 885

Jirds
D. viteae, 742
immune response
cellular, 742
humoral, 742

Kidneys
monoclonal antibodies, 230
S. mansoni antigens, 230

Lactobacillus casei
enhanced hematopoietic response, 156
Lactoferrin
bovine paratuberculosis, 623
granulomas, 623
Legionella pneumophila
lipopolysaccharides, 676
serological characterization, 676
Leishmania mexicana subsp. *mexicana*
macrophages, 36
promastigotes
binding, 36
uptake, 36
Leishmania promastigotes
binding, 36
uptake, 36
Leishmaniasis
metastatic disease, 364
pathophysiology, 364
Lens culinaris
lectin, 309
mitogenesis, 309
M. tuberculosis, 309
phytohemagglutinin, 309
Leprosy
interleukins, 303
macrophages, 303
Lethal factor components
anthrax toxin, 356
B. anthracis, 356
protective immunity, 356
Lipids
endotoxemia, 905
endotoxins, 6, 613, 872
glycolipids, 777
lipid A, 6, 905
lipopolysaccharides, 777
lymphocytes, 777
peroxidation, 613
phospholipids, 777
protection, 905
Salmonella-type lipid A, 872
Lipopolysaccharides
antigenic variation, 337
antigens, 76
C. burnetii, 337
characterization
electrophoretic, 676
serological, 676
colimycin, 725
complexing, 644
E. coli, 617
endotoxemia, 905
endotoxin tolerance, 6
IATS serotype 6, 76
lipid A, 905
L. pneumophila, 676
lung surfactant, 644
lymphocytes, 777
membrane lipids, 777
monoclonal antibodies, 617
monophosphoryl lipid A, 6
opsonins, 617
P. aeruginosa vaccines, 76, 161
plasminogen antiactivator, 725
polymyxin B, 725
polysaccharide-toxin A conjugate, 161
stimulation, 777
S. typhimurium, 6
Liposomes
carbohydrate-protein conjugate, 408
S. mutans, 408
Listeria monocytogenes
cyclosporin A, 12
enhanced resistance to, 730
hemolysins, 50
host defenses, 493
human sera, 493
inhibition, 12
listericidal activity, 688
macrophages, 688, 730
opsonins, 493
pregnancy, 730
serum amyloid P component, 688
T-cell induction, 401
transposon mutagenesis, 50
virulence, 50
Listericidal activity
L. monocytogenes, 688
macrophages, 688
serum amyloid P component, 688
Local active gingival immunization
caries, 682
S. mutans, 682
streptococcal antigen, 682
Lungs
antimicrobial activity, 853
complement, 853

P. aeruginosa, 853
P. aeruginosa cytotoxin, 846
pulmonary microvascular injury, 846
Lung surfactant
complexing, 644
lipopolysaccharides, 644
Lymphocytes
lipopolysaccharides, 777
membrane lipids, 777
M. pulmonis, 594
polyclonal activation, 594
stimulation, 777
Lysozyme
cell walls, 803
complement fixation, 803
Streptococcus spp., 803

Macrophages
B. fragilis, 488
B. malayi, 534
"*C. parvum*," 534
enhanced resistance, 730
fusion inhibition, 252
interleukins, 303
killing mechanisms, 151
leprosy, 303
listericidal activity, 688
L. mexicana subsp. *mexicana*, 36
L. monocytogenes, 688, 730
M. avium, 252
M. bovis, 534
metabolism, 236
microfilarial cytotoxicity, 534
monoclonal antibodies, 36
ontogeny, 236
P. acnes, 534
phagocytosis, 488
phagosomes, 252
pregnancy, 730
promastigotes, 36
serum amyloid P component, 688
superoxide anion release, 236
T. gondii, 151
Malaria
P. chabaudi adami, 637
resistance, 637
T-cell immunity, 637
Membrane damage
E. coli hemolysin, 63
transmembrane pore generation, 63
Meningitis
bacterial growth rates, 484
E. coli, 213
neonatal septicemia, 213
S. pneumoniae, 484
Metastatic disease
leishmaniasis, 364
parasites, 364
Methylprednisolone
bacterial clearance, 26
endotoxin liberation, 26
experimental sepsis, 26
Microfilarial cytotoxicity
B. malayi, 534
macrophages, 534
M. bovis, 534
P. acnes, 534
Migration
Fc receptors, 798
phagocytosis, 798
polymorphonuclear leukocytes, 798
Mitogenesis
inhibition, 309
Lens culinaris lectin, 309
M. tuberculosis, 309
phytohemagglutinin, 309
Monoclonal antibodies
antigens, 786
Aotus monkey immunity, 314
Borrelia spp., 549
C. botulinum, 786
characterization, 56
C. perfringens enterotoxin, 31
E. coli, 56, 110, 617
endotoxins, 56
epitopes, 549
glycoprotein immunogen, 70
lipopolysaccharides, 617
L. mexicana subsp. *mexicana*
binding, 36
uptake, 36
opsonins, 617
P. aeruginosa, 756
peritoneal macrophages, 36
P. falciparum, 314
polysaccharide antigen, 628
production, 31
protection, 617
recombinant *T. pallidum* immunogen, 110
renal pathology, 230
S. mansoni antigens, 230
S. mutans, 628
toxins, 756, 786
T. vaginalis, 70
Monophosphoryl lipid A
early-phase endotoxin tolerance, 6
S. typhimurium, 6
Mouse model
cutaneous infection, 707
Staphylococcus spp., 707
Mouse small intestine
E. coli, 18
mucosal receptors
characterization, 18
identification, 18
Mucosal receptors
characterization, 18
E. coli, 18
identification, 18
mouse small intestine, 18
Multiplication rates
H. influenzae type b
in vitro, 911
in vivo, 911
Murine antibody response
G. muris, 271
gut secretions, 271
Mutanolysin
arthritis, 459
cell wall degradation, 459
Mycobacterial genomic libraries
recombinant cosmid molecules, 101
S. mutans, 101
S. typhimurium, 101
Mycobacterium avium
fusion inhibition, 252
macrophages, 252
phagosomes, 252
Mycobacterium bovis BCG
B. malayi, 534
macrophages, 534
microfilarial cytotoxicity, 534
P. acnes, 534
protein characterization, 293
Mycobacterium leprae
interleukins, 303
macrophages, 303
Mycobacterium paratuberculosis
granulomas, 623
iron metabolism, 623
Mycobacterium tuberculosis
Lens culinaris lectin, 309
mitogenesis, 309
phytohemagglutinin, 309
Mycoplasma pneumoniae
fibroblasts, 240
glutathione redox cycle, 240
vitamin E, 240
Mycoplasma pulmonis
lymphocytes, 594
polyclonal activation, 594

Neisseria gonorrhoeae
antimicrobial activity, 384
arthropathic activity
disseminated disease, 600
peptidoglycan fragments, 600
genetic characterization, 529
granulocytes, 384
outer membrane proteins, 529
pyocin, 384
Neonatal septicemia
E. coli, 213
meningitis, 213
Neutrophil receptors
intracellular killing, 245
P. mirabilis, 245
Neutrophils
B. abortus, 285
bacterial competition, 657
oxygen consumption, 657
preferential inhibition, 285
primary granule release, 285
serological characterization, 657
Nocardia rubra
cell wall skeleton, 128
C3H/HeN mice, 128
colony-stimulating factor, 128
Nucleotide sequence
S. pyogenes bacteriophage T12, 144
type A exotoxin gene, 144

Oligomannoside-type glycopeptides
adhesion inhibition, 428
E. coli, 428
type 1 pili, 428
Opsonins
antibodies, 892
chemotaxins, 748
complement, 892
E. coli, 617, 892
hepatic clearance, 499
host defense, 493
human sera, 493
lipopolysaccharides, 617
L. monocytogenes, 493
monoclonal antibodies, 617
neutrophil-mediated killing, 748
rough mutants, 892
Salmonella spp., 892
S. mansoni, 748
S. pneumoniae, 499
Oral microorganisms
continuous culture, 897
glucose limitation, 897
growth parameters, 897
molar fissures, 620
monoinfected rats, 620

Streptococcus spp., 620
variable colonization, 620
Otitis media
antibodies, 572
H. influenzae, 572
Outer membrane proteins
antigenic variation, 529
genetic characterization, 529, 812
H. influenzae type b, 812
H. pleuropneumoniae, 414
N. gonorrhoeae, 529
profiles, 414
Oxygen consumption
bacterial competition, 657
neutrophils, 657

Parasites
murine malaria, 637
P. chabaudi adami, 637
resistance, 637
S. japonicum, 513
T-cell immunity, 637
Pasteurella multicida
atrophic rhinitis, 175
cell surface proteins, 175
Pellicle receptors
attachment to, 555
S. mutans, 555
S. sobrinus, 555
penB locus
antigenic variation, 529
N. gonorrhoeae, 529
outer membrane proteins, 529
recombination, 529
Peptides
C. albicans, 902
rabbit granulocytes, 902
synergistic activity, 902
Peptidoglycan fragments
arthropathic activity, 600
N. gonorrhoeae, 600
Peptidoglycan-polysaccharide fragments
degradation, 390
group A and D streptococci, 390
Periodontal disease
fluoride, 914
pathogens, 768
systemic host response, 768
T. denticola, 914
Peritoneal exudate neutrophils
cell surface receptors, 245
intracellular killing, 245
P. mirabilis, 245
Phagocytosis
B. fragilis, 488
Fc receptors, 798
inhibition, 488
macrophages, 488
migration, 798
polymorphonuclear leukocytes, 798
Phagosomes
fusion inhibition, 252
macrophages, 252
M. avium, 252
Phytohemagglutinin
Lens culinaris lectin, 309
mitogenesis, 309
M. tuberculosis, 309
Pili
E. coli, 428
glycopeptides, 428
type 1 pili, 428
Plant lectins
adherence, 840
A. naeslundii, 840
glycoproteins, 840
Plaque
fluoride, 914
oral microorganisms
characterization, 897
growth parameters, 897
T. denticola, 914
Plasmids
B. anthracis, 454
exotoxin A gene, 538
immunization studies, 454
P. aeruginosa, 538
toxins, 454
V. cholerae, 476
virulence, 476
Plasminogen antiactivator
colimycin, 725
endothelial cells, 725
lipopolysaccharides, 725
polymyxin B, 725
Plasmodium chabaudi adami
murine malaria, 637
T cells, 637
transfer of resistance, 637
Plasmodium falciparum
Aotus monkey immunity, 314
monoclonal antibodies, 314
Pneumococcal capsular polysaccharide
antibody response, 867
immunoglobulins, 867
Pneumonia
complexing, 644
lipopolysaccharides, 644
lung surfactant, 644
Polyclonal activation
M. pulmonis, 594
rat splenic lymphocytes, 594
Polymorphonuclear leukocytes
bactericidal protein, 90
chemiluminescent response, 397
chemotaxis, 664, 748
Chlamydia spp., 664
Fc receptors, 798
H. influenzae, 397
"*H. somnus*," 792
migration, 798
neutrophil suppression, 792
opsonins, 748
P. aeruginosa, 90
phagocytosis, 798
S. mansoni, 748
S. pneumoniae, 397
Polymyxin B
colimycin, 725
endothelial cells, 725
lipopolysaccharides, 725
plasminogen antiactivator, 725
Polysaccharides
immunoglobulins, 867
S. mutans antigen, 628
type 6 pneumococci, 867
vaccines, 867
Porin antigens
S. typhi, 209
typhoid infection, 209
Pregnancy
enhanced resistance, 730
L. monocytogenes, 730
macrophages, 730
Primary granule release
B. abortus, 285
neutrophils, 285
preferential inhibition, 285
Progesterone
T. mentagrophytes
binding, 763
inhibition, 763
Promastigotes
binding, 36
L. mexicana subsp. *mexicana*, 36
monoclonal antibodies, 36
uptake, 36
Propionibacterium acnes
B. malayi, 534
enhanced hematopoietic response, 156
L. casei, 156
macrophages, 534
M. bovis, 534
microfilarial cytotoxicity, 534
Protease production
B. catarrhalis, 631
immunoglobulins, 631
Proteins
adherence, 840
A. naeslundii, 840
antigenic variation, 529
atrophic rhinitis, 175
bactericidal protein, 90
binding, 714
cell surface proteins, 175
characterization, 293
genetic characterization, 529, 609
group A streptococci, 609
H. influenzae type b, 812
H. pleuropneumoniae, 414
M. bovis BCG, 293
M protein, 609
outer membrane proteins, 414, 529, 812
P. aeruginosa, 90
physiological effects, 90
P. multocida, 175
polymorphonuclear leukocytes, 90
recombination, 529
R. rickettsii, 120
S. aureus, 714
serum spreading factor, 714
Proteolytic enzymes
burn wounds, 200
C. albicans, 200
P. aeruginosa, 200
Proteus mirabilis
cell surface receptors, 245
intracellular killing, 245
peritoneal exudate neutrophils, 245
Pseudomonas aeruginosa
bactericidal protein, 90
burn wounds, 200
C. albicans, 200
complement, 853
cytotoxin, 846
enhanced susceptibility to, 200
exotoxin A, 96, 538
genetic characterization, 538
immune response suppression, 96
immunotype 5 polysaccharide, 161
iron metabolism, 263, 885
killing, 853
lipopolysaccharides, 76
lungs, 853
monoclonal antibodies, 756
polymorphonuclear leukocytes, 90
protective antigen, 76
proteolytic enzymes, 200
pulmonary microvascular injury, 846

pyocyanin, 263
rabbit lungs, 846
siderophores, 885
toxin A, 161, 756
transferrin, 263, 885
vaccines, 76, 161
virulence, 538
Pseudomonas exotoxin A
characterization, 445
fibroblasts, 445
Pulmonary microvascular injury
P. aeruginosa cytotoxin, 846
rabbit lungs, 846
Pyocin
antimicrobial activity, 384
granulocytes, 384
N. gonorrhoeae, 384
Pyocyanin
iron metabolism, 263
P. aeruginosa, 263
transferrin, 263

Q fever
antigenic variation, 337
C. burnetii, 337
lipopolysaccharides, 337

Rabbit granulocyte peptides
C. albicans, 902
synergistic activity, 902
Rat peritoneal macrophages
killing mechanisms, 151
T. gondii, 151
Receptors
adherence, 840
A. naeslundii, 840
Fc, 798
glycoproteins, 840
migration, 798
pellicle, 555
phagocytosis, 798
polymorphonuclear leukocytes, 798
S. mutans, 555
S. sobrinus, 555
Recombinant cosmid molecules
in vivo repackaging, 101
mycobacterial genomic libraries, 101
S. mutans, 101
S. typhimurium, 101
Recombinant DNA-derived immunogen
E. coli, 110
monoclonal antibodies, 110
T. pallidum, 110
Rickettsia conorii
antigens, 326
T-cell hybridomas, 326
Rickettsia rickettsii
antigen detection, 120
humoral immune response, 120
protein immunoprecipitation, 120
Rocky Mountain spotted fever, 120
Rickettsia tsutsugamushi
gamma radiation, 718
host defenses, 718
scrub typhus, 718
Rocky Mountain spotted fever
antigen detection, 120
humoral immune response, 120
protein immunoprecipitation, 120
R. rickettsii, 120
Rough mutants
antibodies, 892
complement, 892
E. coli, 892
opsonins, 892
Salmonella spp., 892

Saliva
antibody responses, 408
S. mutans, 408
Salmonella antigens
immunoglobulin subclass patterns, 834
S. flexneri, 834
Salmonella spp.
antibodies, 892
complement, 892
opsonins, 892
rough mutants, 892
Salmonella typhi
antibodies, 209
porin antigens, 209
typhoid infection, 209
Salmonella typhimurium
delayed-type hypersensitivity, 504
endotoxin, 6
epithelial cell invasion, 828
immunity, 504
interferons, 828
lipid A derivative, 6
mycobacterial genomic libraries, 101
recombinant cosmid molecules, 101
S. mutans, 101
Schistosoma japonicum
granulomatous inflammation, 513
modulation, 513
parasites, 513
Schistosoma mansoni
antigens, 230
chemotaxins, 748
cyclosporin A, 823
monoclonal antibodies, 230
neutrophil-mediated killing, 748
opsonins, 748
protection against, 823
renal pathology, 230
Scrub typhus
gamma radiation, 718
R. tsutsugamushi, 718
Serological characterization
antibodies, 572
bacterial competition, 657
C. jejuni, 702
enteritis, 702
H. influenzae, 572
nontypable, 183
type b, 183
host defenses, 493
lipopolysaccharides, 676
L. monocytogenes, 493
L. pneumophila, 676
molecular oxygen, 657
neutrophils, 657
opsonins, 493
otitis media, 572
Serum amyloid P component
listericidal activity, 688
L. monocytogenes, 688
macrophages, 688
Serum spreading factor
binding, 714
S. aureus, 714
Shigella flexneri
immunoglobulins, 834
lipopolysaccharides, 834
Salmonella antigens, 834
Shigella spp.
epithelial cell invasion, 828
interferons, 828
Siderophores
iron acquisition, 885
P. aeruginosa, 885
transferrin, 885
speA gene
DNA sequence, 144
S. pyogenes bacteriophage T12, 144
Staphylococcal membrane receptors
detection, 671
direct adhesin overlay, 671
S. aureus, 671
Staphylococcus aureus
binding, 714
direct adhesin overlay, 671
hormones, 331
membrane receptors, 671
proteins, 714
serum spreading factor, 714
toxic shock syndrome, 331
Staphylococcus spp.
cutaneous infection, 707
mouse model, 707
Streptococcus mutans
antibodies, 408
antigens, 682
attachment, 555
carbohydrate-protein conjugate, 408
caries prevention, 682
fructosyltransferase gene
characterization, 166
isolation, 166
gingival immunization, 682
liposomes, 408
monoclonal antibodies, 628
mycobacterial genomic libraries, 101
pellicle receptors, 555
polysaccharide antigen, 628
recombinant cosmid molecules, 101
S. sobrinus, 555
S. typhimurium, 101
Streptococcus pneumoniae
body temperature, 484
characterization, 484
hepatic clearance, 499
H. influenzae, 397
meningitis, 484
opsonins, 499
polymorphonuclear leukocytes, 397
Streptococcus pyogenes
bacteriophage T12, 144
DNA sequence, 144
type A exotoxin, 144
Streptococcus sobrinus
attachment, 555
pellicle receptors, 555
S. mutans, 555
Streptococcus spp.
cell wall degradation, 390
complement fixation, 803
group A and D, 390
lysozyme, 803
oral colonization, 620
phlogistic capacity, 803
Superoxide anion release
macrophage ontogeny, 236
macrophages, 236
Suppressive components
"*H. somnus*," 792
polymorphonuclear leukocytes, 792
Synthetic peptides
cholera toxin, 562

Synthetic peptides
cholera toxin, 562
E. coli enterotoxins, 562
enhanced immunity, 562
Syphilis
T. pallidum
antibody binding, 579
antigen 4D, 579
Systemic host response
oral pathogens, 768
periodontitis, 768

T cells
antigens, 326
characterization, 401
hybridomas
characterization, 326
production, 326
isolation, 401
L. monocytogenes, 401
murine malaria, 637
P. chabaudi adami, 637
R. conorii, 326
transfer of resistance, 637
T lymphocytes
abscess formation, 633
nonimmune mice, 633
Toxic shock syndrome
hormonal influence, 331
S. aureus, 331
toxin-1
clearance, 134
S. aureus, 134
Toxins
aminopyridines, 858
anthrax toxin, 356
antigens, 786
B. anthracis, 454
B. bronchiseptica, 370
botulism, 858
C. botulinum, 786, 858
cholera, 562
clearance, 134
C. perfringens enterotoxins, 31
cytotoxins, 846
dermonecrotic toxin, 370
E. coli, 468, 562
E. coli STb enterotoxin, 323
endotoxins, 872
enterotoxins, 468, 562
fibroblasts, 445
immune response suppression, 96
immunization studies, 454
monoclonal antibodies, 31, 756, 786
P. aeruginosa, 161, 846
P. aeruginosa toxin A, 96, 445, 756
plasmids, 454
pulmonary microvascular injury, 846
Salmonella-type lipid A, 872
speA gene, 144
staphylococcal toxic shock syndrome toxin-1, 134
toxin A, 161
type A exotoxin, 144
vaccines, 161
V. cholerae, 45
Toxoplasma gondii
killing, 151
rat peritoneal macrophages, 151
Transferrin
bovine paratuberculosis, 623
granulomas, 623
iron acquisition, 263
P. aeruginosa, 263, 885
pyocyanin, 263
siderophores, 885
Transposons
hemolysins, 50
L. monocytogenes, 50
mutagenesis, 50
virulence, 50
Treponema denticola
fluoride, 914
plaque, 914
Treponema pallidum
antibody binding, 579
complement, 579
E. coli, 110
E. coli outer membrane, 586
extracellular matrix, 736
fibronectin attachment, 736
monoclonal antibodies, 110
recombinant antigen, 579, 586
recombinant DNA-derived immunogen, 110
Trichomonas vaginalis
heterogeneity, 70
major surface immunogen, 70
monoclonal antibodies, 70
Trichophyton mentagrophytes
progesterone
binding, 763
inhibition, 763
Trophozoites
G. muris, 568
immunoglobulins, 568
mouse intestines, 568
Trypanosoma brucei subsp. *gambiense*
complement pathway restriction, 223
killing, 223
Tuberculosis
active inflammation, 341
interleukins, 341
Typhoid infection
antibodies, 209
porin antigens, 209
S. typhi, 209

Ureaplasma urealyticum
characterization, 437
Urinary tract infection
U. urealyticum, 437

Vaccines
B. anthracis, 454, 509
capsular polysaccharides, 867
immunoglobulins, 867
live spore, 509
P. aeruginosa, 76, 161
plasmids, 454
polysaccharide-toxin conjugate, 161
protective antigen, 76, 509
toxin A, 161
Vibrio cholerae
E. coli, 279
enterotoxin
characterization, 45
purification, 45
genetic characterization, 279
hemagglutinin gene, 279
hemolysin
characterization, 319
purification, 319
plasmids, 476
virulence, 476
V. parahaemolyticus, 319
Vibrio parahaemolyticus
hemolysins, 319
V. cholerae, 319
Virulence
B. gingivalis, 349
hemin, 349
hemolysins, 50
L. monocytogenes, 50
plasmid mediation, 476
transposon mutagenesis, 50
V. cholerae, 476
Vitamin E
fibroblasts, 240
glutathione redox cycle, 240
M. pneumoniae, 240
protective effects, 240

WiDr cells
B. pertussis
adherence, 695
hemagglutinin, 695

Yersinia enterocolitica
HEp-2 cells, 85
serotypic characterization, 85